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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,926	01/07/2004	Michael R. Detty	19226/2241 (R-5775)	5689

7590 07/11/2006

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EXAMINER
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MOORE, MARGARET G

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/753,926

Applicant(s)

DETTY ET AL.

Examiner

Margaret G. Moore

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 to 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 to 3, 7 to 12, 16 to 23, 27 to 31 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 4 to 6, 13 to 15 and 24 to 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1712

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 20 to 22, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Simendinger or WO 01/14497.

3. These rejections are based on the rationale of record. As such this will not be repeated.

Applicants' traversal is not persuasive.

For both Simendinger and Jones, applicants argue that they do not require combining the sol-gel<sup>1</sup> matrix with additives. Please note that claim 20 uses the phrase "comprises" which allows for the addition of any other ingredient. See MPEP 2111.03. As such any additives in the prior art are embraced by the composition used in the method of claim 20.

For claim 21, the Examiner notes that neither reference explicitly uses the term xerogel. However both references teach adding a silica gel to the sol-gel process (see Simendinger column 4, line 36 and Example 1; Jones page 7). Though these references do not specifically teach a xerogel, due to the limited selection of gels available to the skilled artisan (e.g. aerogel, xerogel and hydrogel) the skilled artisan

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<sup>1</sup> The fourth to the last line in page 26 of applicants' response actually states "do not require combining the xerogel with additives". The Examiner assumes that, for at least claim 20, applicants intended to refer to the sol-gel since no xero-gel is required in this claim.

Art Unit: 1712

would immediately envision the selection of a xerogel to the sol-gel compositions therein. Note that the claims only require a sol-gel *processed* xerogel which embraces xerogels reacted with or in the reaction product of a sol-gel.

4. Claims 1 to 3, 8 to 12, 17 to 23 and 28 to 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Mager et al.

5. Claims 1 to 3, 8, 10 to 12, 17 to 23 and 28, 30 and 31 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 02/094410, herein Malik.

6. Claims 1 to 3, 7, 10 to 12, 16, 19 to 23, 27, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi et al.

7. Claims 1 to 3, 7, 9 to 12, 16, 18 to 23, 27 and 29 to 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kwon et al.

8. Each of these rejections is based on the rationale of record and as such this will not be repeated. Applicants' traversal is not persuasive.

For each rejection applicants note that the claims require a sol-gel matrix/organo-chalcogeno derivative combination. Applicants are of the position that none of the prior art references teach such a combination. The Examiner disagrees and in fact does not understand this position. Each rejection specifically pointed out where such a combination was taught. Perhaps applicants do not believe that these references teach an dendrimeric organochalcogeno derivative, but the Examiner notes that this is simply a dendrimer having organic and chalcogen groups (the latter of which is met by the presence of oxygen).

For Mager, the dendrimers on column 2, lines 50 and on, each contain an -OH group as well as R groups, meeting the chalcogen and organic requirement, respectively. Column 3, line 15, teaches a sol gel matrix.

For Malik, the dendrimers are shown on the bottom of page 12 as well as Figures 5 through 8. In Figure 6, for instance, the =O groups and the phenyl groups meet the chalcogen and organic requirement, respectively. Page 12, line 22, teaches sol-gel bounded to a dendrimer moiety.

For Hayashi et al. note that a benzyl ether dendrimer will meet both the chalcogen and organic requirement. The previous rejection (bottom of page 3 through page 4) details how Hayashi et al. meets the sol-gel requirement.

Finally, for Kwon, for Formula 3, when "L" is polyethylene glycol, this meets both the chalcogen and organic requirements. Again see the previous rejection in paragraph 6 as to how Kwon et al. meets the sol-gel requirement.

Thus applicants' arguments simply aren't persuasive and the absence of any detailed argument makes it unclear how applicants actually believe the claims differentiate themselves from the prior art. Arguments directed towards use as an anti-fouling agent are not persuasive since this is a future intended use of the composition.

9. Claims 4 to 6, 13 to 15 and 24 to 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach or suggest these particular dendrimers in combination with a sol-gel matrix as claimed. This is consistent with that noted in the previous office action.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

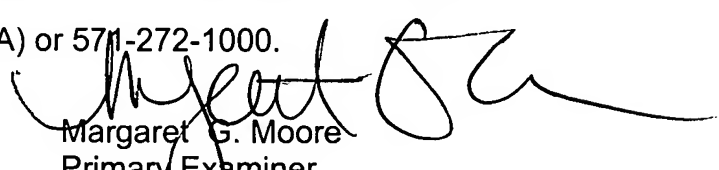
Art Unit: 1712

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
7/5/06